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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,688	05/07/2007	John Edward Poole	RFB1P001	2834

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EXAMINER	
HARDEE, JOHN R	
ART UNIT	PAPER NUMBER
1796	
MAIL DATE	DELIVERY MODE
11/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/590,688	POOLE ET AL.	
	Examiner	Art Unit	
	JOHN R. HARDEE	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *45-63* is/are pending in the application.

4a) Of the above claim(s) *46-49* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *45 and 50-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05092007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. Applicant has submitted over **50** references for the examiner's consideration in the Information Disclosure Statements filed May 9, 2007. Of these, numerous references, such as US 4,198,313; US 5,304,320; US 5,080,823; and US 5,026,497 do not appear particularly pertinent to the instant claims. It is unclear why these were cited because they do not appear to be "material to patentability" of the claimed invention (37 CFR 1.56).

MPEP 2004, particularly paragraph (13), sets forth guidelines to aid applicants in their duty of disclosure. In this section it is stated:

"It is desirable to avoid submission of long lists of documents if it can be avoided. Eliminate clearly irrelevant or marginally pertinent cumulative information. If a long list is submitted, highlight those documents, which have been specifically brought to the applicant's attention and/or are known to be of most significance. See *Penn Yan Boats, Inc., v. Sea Lark Boats, Inc.,* 359 F. Supp. 948, 175 USPQ 260 (S.D. Fla. 1972), aff'd, 479 2d 1388, 178 USPQ 577 (5th Cir. 1973), cert. denied 414 U.S. 874 (1974)."

The examiner requests that applicant provide a list of the 3-5 most pertinent references and their relevance to the presently claimed invention.

2. One of the submitted IDS documents is blank.

Election/Restrictions

3. Applicant's election without traverse of Group III in the reply filed on October 27, 2008 is acknowledged with appreciation.

4. Claims 46-49 are withdrawn from consideration by the examiner as being drawn to inventions non-elected without traverse. The remaining claims were searched and examined only to the extent that they read on the elected invention.

5. The restriction requirement is made FINAL.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 45 and 50-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 1,193,305 A1. The reference discloses hydrofluorocarbon refrigerant compositions soluble in lubricating oil. Compositions comprising R-32, R-143a, R-125, R-134a and mixtures thereof are preferred [0022]. Compositions comprising 80-99.9% by weight of a refrigerant selected from Table IV and 20-0.1% by weight of a solubilizing agent selected from Table II and mixtures thereof are disclosed as preferred [0017]. See Mixture 4 in Table IV, which comprises 40-60% of R-125; 20-39% of R-143a and 2-40% of R-134a. Table II discloses solubilizing agents, and includes butane, isobutane and isopentane. The examiner takes the position that the disclosure of "mixtures thereof" makes it obvious to use combinations of hydrocarbons, in the absence of evidence of unexpected properties. This reference differs from the claimed subject matter in that it does not disclose a composition which reads on applicant's claims with sufficient specificity to constitute anticipation.

It would have been obvious at the time the invention was made to make such a composition, because this reference teaches that all of the ingredients recited by applicants are suitable for inclusion in a refrigerant composition. The person of ordinary skill in the refrigeration art would expect the recited compositions to have properties similar to those compositions which are exemplified, absent a showing to the contrary.

In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. *In re Wertheim,* 541 F.2d 257,

191 USPQ 90 (CCPA 1976); *In re Woodruff,* 919 F.2d 1575, 16 USPQ2d 1934 (Fed Cir. 1990). Regarding flammability and vapor phase data, the examiner takes the position that these can be met while working within the teaching of the reference.

10. Claims 45 and 50-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/03473 A1. The reference discloses refrigerant compositions comprising a hydrofluorocarbon which may be R-143a; R-125; at least one hydrocarbon; and an optional additional hydrofluorocarbon which may be R-134a (abstract). Suitable compositions comprise 20-60% by weight of R-143a; 20-60% of R-125; 1-7% of a hydrocarbon; and 1-20% by weight of R-134a (p. 4, lines 27+). Suitable hydrocarbons include isobutane, butane and isopentane (p. 4, lines 4+). Formulation of zeotropic mixtures is disclosed in the reference at p. 6, lines 6+. The examiner takes the position that the disclosure of "at least one hydrocarbon" makes it obvious to use combinations of hydrocarbons, in the absence of evidence of unexpected properties. This reference differs from the claimed subject matter in that it does not disclose a composition which reads on applicant's claims with sufficient specificity to constitute anticipation.

It would have been obvious at the time the invention was made to make such a composition, because this reference teaches that all of the ingredients recited by applicants are suitable for inclusion in a refrigerant composition. The person of ordinary skill in the refrigeration art would expect the recited compositions to have properties similar to those compositions which are exemplified, absent a showing to the contrary.

In the case where the claimed ranges overlap or lie inside ranges disclosed by the prior art, a *prima facie* case of obviousness exists. *In re Wertheim,* 541 F.2d 257, 191 USPQ 90 (CCPA 1976); *In re Woodruff,* 919 F.2d 1575, 16 USPQ2d 1934 (Fed Cir. 1990). Regarding flammability and vapor phase data, the examiner takes the position that these can be met while working within the teaching of the reference.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to the examiner, Dr. John R. Hardee, whose telephone number is (571) 272-1318. The examiner can normally be reached on Monday through Friday from 8:00 until 4:30. In the event that the examiner is not available, his supervisor, Mr. Harold Pyon, may be reached at (571) 272-1498.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John R. Hardee/
Primary Examiner
November 12, 2008